

June 8, 2011

Via Electronic Filing

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, D.C. 20554

Re: Written *Ex Parte* Presentation
ET Docket No. 09-36

Dear Ms. Dortch:

The Alfred Mann Foundation for Scientific Research (“AMF”) submits this response to an *ex parte* filing, dated May 19, 2011, by Engineers for the Integrity of Broadcast Auxiliary Services Spectrum (“EIBASS”) regarding medical micropower network (“MMN”) devices.¹

As an initial matter, EIBASS concedes that “MMNS is no interference threat to 455-456 MHz RPU operations.”² EIBASS, however, continues to allege without any technical support that MMN devices “could suffer co-channel interference or brute force overload” from broadcast auxiliary service remote pickup (“RPU”) stations operating at 455-456 MHz.³ EIBASS

¹ See Rebuttal *Ex Parte* Comments of EIBASS (May 19, 2011) (“EIBASS Comments”).

² *Id.* at 1. EIBASS also inexplicably expresses concern regarding “the secrecy surrounding the AMF W2DXLW experimental license, and the suppression of its six-month status reports.” *Id.* This claim is mystifying, particularly since the details of AMF’s experimental license and semi-annual progress reports are publicly available and can be obtained through a simple search of the Commission’s experimental license database.

³ *Id.* at 2. The results of these interference analyses and tests independently have been reviewed and approved by multiple organizations, including the Joint Spectrum Center (“JSC”), Comsearch Government Solutions (as a subcontractor to the ITT Corporation), and Aerospace Corporation (“Aerospace”). See Letter from Cheryl A. Tritt, Counsel to AMF, to Marlene H.

reiterates this speculation, despite comprehensive interference analyses and tests demonstrating both (1) the effectiveness of MMN interference mitigation techniques and (2) the electromagnetic compatibility (“EMC”) between MMN devices and incumbent (both government and non-government) systems in the 413-457 MHz band.⁴

Significantly, EIBASS continues to ignore or misunderstand the MMN system’s dynamic channel switching mechanism, despite ample descriptions of this capability (along with a technical demonstration of its effectiveness) in multiple AMF filings.⁵ When a specific channel becomes too congested to support reliable operation, the MMN system will change to an alternate, available channel. The system’s ability to switch channels without losing medical functions was verified in independent laboratory testing conducted by Aerospace.⁶ Simply put, if, as EIBASS contends, the MMN system would receive harmful interference from RPU stations in the 451-457 MHz channel, then the system readily could avoid interference by selecting an available channel from the remaining three channels.

In view of this dynamic channel switching capability, providing MMN systems with as many channel options as possible is crucial. The more channel options an MMN system has, the higher the probability that it will be able to find a useable channel. Even though a channel may be unavailable for MMN use under most circumstances, its availability under other circumstances (*e.g.*, rural areas with fewer, if any, incumbent wireless operations) serves an important function in increasing the overall reliability of the system.

In the rare event that the MMN system is unable to implement a planned channel change *and* all other interference management measures are somehow unavailable or ineffective, the MMN system has proven effective in its ability to shut down gracefully to protect the user during the time required for the system to select an available channel and reinitiate communications.⁷ EIBASS speculates that patients nonetheless are placed at risk in this scenario and that the graceful shutdown process offers no adequate protection.⁸ Although some degree of risk may be

Dortch, Secretary, FCC, at 1-2, 5-6 (Apr. 8, 2011) (attaching test reports and other technical documents, including the “JSC Report” and “Aerospace Test Report”) (“April 2011 AMF Letter”).

⁴ See April 2011 AMF Letter.

⁵ See, *e.g.*, *id.* at 3, 5-6; Letter from Cheryl A. Tritt, Counsel to AMF, to Marlene H. Dortch, Secretary, FCC, at 3 (Aug. 12, 2010) (“August 2010 AMF Letter”).

⁶ See April 2011 AMF Letter at 5-6.

⁷ See *id.* at 6.

⁸ See EIBASS Comments at 3.

inherent in most, if not all, medical devices offering therapeutic benefits through wireless or even non-wireless means, AMF has invested substantial time and resources in implementing sufficient safeguards to protect patients from these risks. Moreover, the rigorous Food and Drug Administration qualification process is designed to assess these risks and determine whether they are outweighed by the benefits to users who otherwise would suffer from lack of effective treatment.

EIBASS concedes that RPU stations used for dispatching of electronic news gathering and for traffic reporting are “similar to private Land Mobile operations (and probably many federal government operations),” but incorrectly argues that RPU stations used for remote broadcasts are significantly different from any of the numerous government and non-government incumbent systems examined in the JSC Report and Aerospace Test Report.⁹ Specifically, EIBASS claims that portable RPU base stations, unlike land mobile stations, operate at fixed locations and continuously during remote broadcasts.¹⁰ This is nonsense because land mobile base stations also operate at fixed locations, with very high duty cycles, and typically at much higher power levels than RPU base stations used for remote broadcasts. In fact, many of the tests documented in the Aerospace Test Report were conducted using simulated continuous land mobile signals comparable to or stronger than RPU stations used for remote broadcasts.

Moreover, EIBASS offers no explanation as to how any special operating characteristics of RPU stations would result in greater interference than that caused by the incumbent signals examined in the JSC Report and Aerospace Test Report. EIBASS is conspicuously silent on whether portable RPU base stations operate at higher power levels than land mobile or other systems examined in the JSC Report and Aerospace Test Report. Additionally, the continuous operation of portable RPU base stations from fixed locations allows MMN systems to detect the RPU signals more easily and thus change channels to avoid harmful interference, if required. Furthermore, as AMF previously stated, the narrowband operation of most, if not all, RPU stations allows an MMN system to spectrally excise, or notch out, the narrowband RPU signals, thus enabling the MMN system to transmit and receive its own wideband signals.¹¹

⁹ *Id.* at 3-4.

¹⁰ *Id.* at 3.

¹¹ *See* August 2010 AMF Letter at 3.

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Based upon the foregoing, AMF urges the Commission to reject the unsubstantiated claims raised by EIBASS and promptly adopt rules to facilitate deployment of MMN systems that will offer invaluable health and public interest benefits for millions of disabled Americans.

Sincerely,

/s/ Cheryl A. Tritt
Cheryl A. Tritt
Counsel to the Alfred Mann Foundation for
Scientific Research

cc: Julius Knapp
Geraldine Matisse